

What is claimed is

1. An apparatus for inspecting a specimen, comprising:

inspection means having a sensor to detect an image of a pattern formed on a specimen to be inspected and a processor to process the detected image to extract a defect candidate of the pattern with its location information;

output means outputting an image of the detected defect candidate and data including location information of the defect candidate;

information transfer means transferring information outputted from the output means;

store means storing information outputted from the output means and transferred by the information transfer means; and

processing means having a display screen and the processing means processes the information stored in the store means and displays the processed information on the display screen.

2. The apparatus according to claim 1, wherein the processing means displays defect candidate location data on the display screen.

3. The apparatus according to claim 1, wherein the processing means displays an image of the defect candidate on the display screen.

4. The apparatus according to claim 1, wherein the processing means displays a defect candidate location data in map format on the display screen.

5. The apparatus according to claim 1, wherein the processing means classifies the defect candidates stored in the store means and displays the classified defect candidates on the display screen.

6. The apparatus according to claim 5, wherein the processing means displays the classified defect candidate image on the display screen.

7. The apparatus according to claim 5, wherein the processing means displays the classified defect candidates in map format on the display screen.

8. An apparatus for inspecting a specimen, comprising:  
image detecting unit which detects images of a pattern formed on a substrate;

defect candidate extracting unit which extracts a defect candidate from the detected images;

outputting unit which outputs data of the extracted defect candidate including images of the extracted defect candidate;

data storing unit which stores the outputted data from the outputting unit including images of the extracted defect candidate;

processing unit which processes the stored data; and

display unit which displays processed data on a display screen.

9. An apparatus according to the claim 8, wherein said image detecting unit detects optical image of the pattern.

10. An apparatus according to the claim 8, wherein said image detecting unit detects secondary electron image of the pattern.
11. An apparatus according to the claim 8, wherein said defect candidate extracting unit extracts a defect candidate image and its location information from the detected images.
12. An apparatus according to the claim 8, wherein said defect candidate extracting unit extracts a defect candidate from the detected images by comparing the detected images with reference images.
13. An apparatus according to the claim 8, wherein said outputting unit and the data storing unit are connected by a network.
14. An apparatus according to the claim 8, wherein said processing unit detects defects among the stored defect candidates and the display unit displays an image of the extracted defect on the display screen.
15. An apparatus according to the claim 8, wherein said processing unit detects defects among the stored defect candidates and the display unit displays the extracted defect in a map form on the display screen.
16. An apparatus according to the claim 8, wherein said processing unit detects defects among the stored defect candidates by using a valuable threshold value.
17. An apparatus according to the claim 15, wherein said valuable threshold value is determined on the display screen.
18. An apparatus for inspecting a specimen, comprising:

defect candidate data processing unit for processing data of defect candidates including images of defect candidates which are detected by a detection machine and transferred through a communication line and stored in a memory; and

display unit which displays a processed data of the defect candidate on a screen,

wherein said defect candidate data processing unit detect defects among the defect candidates by using a threshold value determined on the screen of the display unit.

19. An apparatus according to the claim 18, wherein said defect candidate data processing unit classifies the defect candidate data and the display unit displays the classified defect candidate data on the screen.

20. An apparatus according to the claim 18, wherein said display unit displays both an image of defect detected by the defect candidate data processing unit and a map which indicates distribution of the detected defect on the substrate.

21. An apparatus according to the claim 20, wherein said map indicates distribution of the defect classified in the same category with the displayed defect image by the defect candidate data processing unit.

22. An apparatus according to the claim 18, wherein the display unit displays an image of defect which is pointed out on the map displayed on the screen.